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THE ELEMENTARY SCHOOL TEACHER

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THE VALUE OF PSYCHOLOGY FOR TEACHERS.¹

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I.

CONSIDERING the trend of current opinion, it is probably not necessary to dwell upon the proposition that psychological study of the rational or formal or static or faculty sort cannot be made of much, if any, practical value to the teacher. This seems apparent when we consider what task the teacher must accomplish. Stated in a general way, he must lead his pupils to attain ever more perfect adjustment to their environments. The teacher has to deal with a reactive, dynamic being. He can have no interest in mental processes or forms except as they are concerned in reaction. If it is legitimate for any purpose to view the mind morphologically, it is at least of slight consequence to one who must always deal with mental *function*.

Indeed, I think the teacher may be injured by getting in the way of looking upon mind as anything but a functional organ. I have in my classes sometimes mature students who have had a year or so of formal faculty psychology preparatory to teaching. They have acquired a body of terms which they employ verbally and statically to explain psychological phenomena. Now, these terms get in the way of their looking upon mind as a dynamic agency. If they address themselves to a psychological problem,

¹ An address delivered at the dedication exercises of the School of Education of the University of Chicago, May 13, 1904. From the stenographic report, revised and condensed by the author.

their attention runs over into their verbal terms, and they really cannot see the reacting individual who is trying to adjust himself to some phase of his environment. Happily, though, the study of formal text-book psychology has very little effect one way or another upon the work of many who pursue it, for it is so remote from the teaching process that the two things will not run together. Such psychology is not any closer to teaching than is astronomy or calculus. It is set off in the teacher's mind in a department by itself, so it does not soak into the teaching system to any appreciable extent.

Efficiency in the schoolroom requires first of all that the teacher should be made what I may call "pupil-minded." He must be got into the way of observing how his pupils respond to the situations he presents, and why, and what will secure him most surely and economically the response he wishes. Upon this insight in the teacher depends all success in teaching. The ideal is to make the teacher a naturalist in the human sphere. He must be got, if possible, to see what are the springs of conduct in childhood and youth, and how he can present the stimuli of education so that they may be reacted upon by native impulses and experience in such a way as to correlate the individual ever more closely with his environments. The teacher needs to observe intelligently what happens in the schoolroom; which implies that he must be able to refer particular manifestations to general principles of human nature. Doubtless he gains some of this insight from his every-day contact with people. He could not survive in a social régime if he did not discover and observe some at least of the deepest tendencies of human nature. He may not be able to state what he knows in formal principles, but yet he *feels* that certain traits are common to all men, and he will take due account of them in his attitudes toward people. The one who is most sensitive to these traits of human life—who knows people best, in other words—will, of course, other things being equal, make the best teacher. But with even the most sensitive and cosmopolitan individual there will be subtle principles of human nature—of child-nature, at any rate—of supreme importance in education which he will not appreciate because they have

not been involved in the give-and-take relations of every-day life. A man may know how to read well and yet not be a grammarian. So he may see much of sick people and not be a physician. And the principle applies universally. It is a matter of common observation that the very best teachers in general qualities are very dull when it comes to observing the influence of various studies and methods of teaching upon the thought and conduct of their pupils. One may see a good man in some respects teaching a subject like physics in a verbal, mechanical, fruitless fashion, and he keeps on blindly, saying to himself that his pupils are getting good discipline from his work. He has a few formal pedagogical terms infixed in his mind, and these blur his vision for the phenomena occurring right before his eyes. I think this is the type of most cases of bad teaching, and it suggests the supreme need in training which I have suggested—making the individual “pupil-minded.”

II.

When it comes to the question of presenting studies, it will be granted, of course, that, since it is the business of the teacher to guide the pupil to perfect his adjustments, he must himself have made the adjustments which he proposes to have his pupil make; that is to say, he must know his subject thoroughly. And I am convinced that if he had mastered it in its historical or evolutionary, as well as merely logical, development, he would gain considerable which would aid him in presenting it to his pupil economically and effectively. Then he could appreciate the main movements which his pupil would be likely to make at various stages in his efforts to assimilate it. He would see that, speaking in popular phrases, the human mind in thinking any special subject will move through it and around it in a characteristic manner. Knowing this, the teacher could anticipate the pupil's difficulties, and he would understand how to help him best to keep to the straight road, or at least to regain it readily whenever he strayed into by-paths. One who could trace out the detailed phylogenetic development of his subject should know something of its psychology from the ontogenetic standpoint.

Any study is, of course, but a branch of psychology in a certain sense; it is a record of the way men have regarded a particular phase of their environment. The point I wish to make is that if the teacher understood the developmental course of physics, *e. g.*, he would have before him a record, more or less clear and distinct, of how the individual would conduct himself in assimilating his subject. He would know how the mind of the race moved around various topics, and why; what experiences led men out of error into truth; what was the stimulus which led to the development of his subject; and so on. With this knowledge he could locate the pupil in all his wanderings, and lead him back to the trail; and he could save him much waste of time and energy by foreseeing his wrong tendencies and guarding against them.

But we are speaking here of an ideal which has probably never been realized in respect of any study. There are immense gaps in our knowledge of what has been the experience of any and all the subjects of instruction, which represent the most successful efforts of the race in adjusting itself to its environments. And this makes it necessary that the teacher should study what is known regarding the way in which the individual mind most readily assimilates these subjects. He must be made to reflect upon the peculiar nature of the difficulties that lie in the route, what equipment the pupil has for surmounting them, and just what kind of help will be of greatest assistance to him. I speak as if this were all understood, which is doubtless not the case; but yet there is something at least already established, and more is being added to our knowledge every day; and the teacher ought to possess himself of so much as is known.

But it is maintained by some that the teacher gains this knowledge without special study. He has been over the course himself; he has it all in his own experience; why cannot he run over the record and gain enlightenment if he needs it? We are told that one who has made an adjustment himself should be able to lead another to make it. But now, there is probably no adult who can go back over his history and recall the detailed steps he took in assimilating arithmetic. These steps

have for all practical purposes been obliterated. Mental development proceeds by consolidation of experiences; details of adjusting processes are being constantly merged into general reactive systems, which in time become largely or entirely subconscious. The more perfectly one has made an adjustment, the more difficult it is for him to review the processes by which it was made. The greatest artists often know the least of the *modus operandi* of acquiring their art. This was impressed upon me emphatically in a recent experiment which I made in assigning to two students a thesis on the psychology of arithmetic. One was to work it out by introspection and logical analysis, while the other was to teach it, and observe all that occurred. The first individual produced a formal analysis which failed to take account of perhaps the most vital experiences of the child in mastering this subject. He could not discover many of these experiences from a merely logical treatment of his theme, even when he got what light he could from trying to recall how he learned arithmetic himself.

I do not forget that the text-book in any study plans to present it in the order in which the pupil will most effectively assimilate it. Now, the text is, of course, based upon some sort of conception of developmental psychology in a special field. Without question the book is of great value in instruction. It is the product usually of many generations of observation as to the manner in which the mind of the learner will most easily conquer the subject treated. But, as a matter of fact, the available texts for the most part have been worked out from the adult standpoint in large measure. What we have got, then, is a logical arrangement of the facts of arithmetic, for instance, that we regard as of greatest value. But a sequence of facts in any subject arranged according to their degree of objective complexity may not be the best sequence at all when regarded from the standpoint of the learner. Pedagogical and logical sequences in any field are not necessarily the same.

When it is said that the teacher must track out the course which the learner pursues in assimilating a subject, it is understood, of course, that with experience focal consciousness of the

pupil's processes will gradually disappear, and the teacher will handle him appropriately in a more or less subconscious way. As long as the teacher must laboriously follow the movements of his pupil's mind he will be handicapped as an artist. Expert action in teaching, as in other things, must be facile, and in considerable part automatic. Given a situation in his special field, the expert knows without hesitation what is to be done with reference to it. But in the development of this expertness he must first act deliberately; then he must repeat his action often enough so that he may acquire the power of reacting readily and easily. It should be added that the teacher ought not to be made to reflect upon the mechanism of any process which he can perform properly as a matter of suggestion. Automatic action is more effective and safer in all simple situations, if it is rightly adjusted, than reflective action. But in many of the situations in the schoolroom the teacher is not likely to have acquired automatic action of the right sort, and this is why he must be brought to reflect upon what is best to do in these situations. It is probable that much of the work in teaching can never become automatic, because of the variety of minds with which the teacher has to deal, and of the necessity of constant appeal to general principles in the interpretation of special manifestations. If all pupils of a given age reacted in just the same way to every situation in arithmetic, say, one could conceive that after a few years a teacher might be able to teach the subject with as little reflection as he employs in walking or in talking; but no one will grant the assumption. The principle, though, is important, for one may see teachers who are every year growing more expert in the discipline of their pupils and in the teaching of their subjects. Through continued experience they come to *feel* the tendency of different types of minds, and they perceive without calculation what is to be done in the different situations which arise. This, then, must be our ideal—to lead the teacher to study the movements of his pupils' minds just to the extent that this is necessary in order that he may interpret correctly the phenomena of the schoolroom, and to deal most economically and effectively with them.

III.

The teacher ought to make his start in becoming psychologically minded by studying his own experience in order to discover what moves him to action, and what is the method of his attaining adjustment to any situation. In some respects his own experience will be close to that of his pupil. For one thing, he is himself learning during his academic career; and if he can clearly see what happens in his own case, and why and with what results, and what is the line of least resistance in attacking any problem, he will have a basis, at any rate, for understanding his pupil's attitudes, and assisting him to find himself readily. If, for instance, the teacher is beginning a foreign language, and he can discover what steps he must take in order to assimilate it most easily, he will gain some insight into the way in which his pupil will most economically get possession of the mother-tongue. I say he will gain *some* insight; he surely will not gain a complete and correct view, for his own experience will not be precisely like that of his pupil, though viewed *ab extra* they might appear to be so. He is learning the same thing as his pupil; why should not their mental movements be the same? For one reason, because the teacher brings to his study an equipment which his pupil does not possess. He brings not only knowledge which acts in an apperceiving way, but he also brings a tendency of mind which is a generalization of his experience. He has come to regard language more analytically than does his pupil; he has acquired a sort of grammatical sense, too, which his pupil lacks. But if we could lead him to see what he possesses that his pupil does not which makes his present experience different from his pupil's, then we should help him immensely. The teacher needs to get into the habit of asking questions relating to the pupil's stock of experience; he needs to be made *minded* in this direction.

Then, in a broader view, it will be granted that the psychology of the schoolroom is not different in essential principles from the psychology of out-of-doors. The objective situations are, of course, not identical, but the processes in reaction thereupon are undoubtedly the same in principle. The method of the child's

assimilating geography in the school is not essentially different from the method of his getting acquainted with the country about his home. The psychology of schoolroom discipline is not different in essence from the psychology of conduct in the home or on the street. And now, if the intending teacher can interpret his own social experience, and see what are the springs of conduct in human nature, and how social action can be most effectively stimulated, he will gain much that will greatly illumine the work of the schoolroom.

While thus granting the value of the teacher's study of his own experience, it should be said that at the same time there is danger of carrying this too far. If he dwells upon it too greatly, it is likely to subtend too large an angle in his vision of his pupil. If he goes too far in introspection, he will come ultimately to see his pupil solely in terms of his own experience. This, of course, is a very simple principle of psychology; what fills our minds often comes gradually to exclude everything else. That which will not fit into what is in our minds is not discerned at all. This is the chief trouble now with most of our educational psychology. But how can we tell just how far to carry the teacher in the work of introspection? In general, I should say that alongside of his introspection from the beginning must go concrete study of his pupil. If either study must suffer, I should say it ought to be introspection. It will result much better to get the teacher into a habit of observing his pupil's reactions rather than his own. If he observes pupils closely enough, he will come to discover certain uniform modes of action, even if he does not have any clear principles of interpretation derived from the study of his own experience. But if his own experience becomes too stable, if it projects itself into the focus of attention whenever he is before his pupils, it will prejudice his action.

It will not be in place here to discuss in any detail the methods of prosecuting the kinds of studies which have been indicated—the study of experience and of the pupil directly. But it may be said, in passing, that what the teacher needs is to get a view as a whole of the pupil's experience as well as of his own. It is

of little account for him to pick out some more or less isolated act and study it in detail. If he cannot discover the causes of it, the conditions which have given rise to it, and for what purpose it occurs—if he cannot see it in its *setting*, his knowledge will be of little worth to him. This is to say that, whatever method of study the teacher pursues, he must come finally, at any rate, to conceive of the pupil's mind and life as a unity. But this does not mean that minute analysis is to be avoided altogether. On the contrary, such analysis seems absolutely essential if any success whatever is to be achieved in psychological study. The problem here is no different from what it is in any phase of scientific work. No just conception of the nature of objects or phenomena can be gained from studying them merely in the large, or on the outside. Little progress was made in the natural sciences until the analytic method of study was adopted, and the same appears to be true in the psychological sciences. Simply to look on at very complex phenomena is likely to give either an extremely shallow and unsatisfactory, or else a distorted, view. Under such circumstances one sees with his prejudices, and is likely to miss the really vital characteristics of the thing he studies.

These observations lead up to the proposition that the teacher will be benefited by the method of experimental psychology applied to his special problems. I do not imagine the teacher will gain much from experiments upon the threshold of consciousness, as an instance, but I think he will be greatly benefited by an experimental study on some phase of the learning of language, as a typical example. In this way he will be led to the apprehension of subtle processes which otherwise he would never detect, but which for a correct understanding of his problems he must take account of. To make my remark concrete, take such a study as Mr. Bagley's *Apperception of the Spoken Sentence*. This reveals elementary processes which simple observation would never disclose, but which illumine the whole subject of language-learning, and so of language-teaching.

I do not say that the teacher needs to study experimental psychology as it is presented in any text or conducted in any

laboratory today. As a science it deals with much that only very remotely can concern the teacher. But what I urge is that he should know its method, and so much of its results as bear directly upon his tasks in the schoolroom. And these results must relate to the mind as a functional organ. They must concern the individual in his efforts to assimilate himself with some phase of the world. I think the teacher will gain little, if anything, of worth from examining tables showing what is the average number of times a hundred thousand children of any age can tap with a finger or any other bodily member, for instance. Whatever this and similar facts may be worth as items of general information, they certainly are not close enough to the processes of the class-room to throw any light upon them. In a way, doubtless, every psychological fact, and perhaps every other sort of fact, bears some relation, near or remote, to the work of education; but some of these facts are so distant that the teacher can never make the connection. It is true probably that statistical tables and summaries will with some persons determine the validity of principles of human nature, but if the teacher is concerned much with these tables, he will be lost in his figures, and the pupil will move on without his guidance. Or, pending his mathematical computations, he will hinder his pupil in his progress, not being able to get any wisdom from his figures as to the concrete human being before him.

In passing, we may ask whether the teacher is likely to gain anything of value from a study of physiological psychology? It is apparent that in his teaching he is not concerned, directly at any rate, with either the structure of nerve elements or their function. Even if every psychosis is accompanied by a neurosis, it may nevertheless be enough for the teacher to take account only of the former. But this is not to say that mental function could not be made clearer if the teacher knew the outlines at least of cerebral structure and function. To my mind something may be gained by giving current psychological theory a foundation in the architecture and function of the nervous system. It is understood, of course, that in the present stage of our knowledge we cannot say that there is any very detailed

correspondence between mental and nervous function, but those who ought to know say that there are certain general correspondences which are well established, and which it would be profitable for the teacher to understand. If it should give him nothing more, it will at least impress upon him the fact that mental action must occur according to certain patterns; its main features, at any rate, are absolutely determined because of the medium through which it must be expressed.

Then when it comes to abnormal manifestations, which the teacher cannot ignore, physiological psychology will prove of considerable value. Mental defects and deficiencies seem inexplicable except on physiological grounds. This is not to say that they are wholly explicable upon any grounds; but they are made reasonably clear by the aid of physiology. In ancient times, before any close connection between mind and brain was thought of, men believed that mental errancy was due to lethargy of will or to demoniacal possession; and all are familiar with the consequences of such views. Now, it is probable that the young teacher will be more or less strongly inclined toward this view, unless his natural tendencies are corrected by some study of the physiological basis of mental defect. Already this study, crude and imperfect as it still is, has illumined some of the dark spots in teaching, and made some children everywhere happier as well as more efficient.

Thus far I have spoken mainly of that phase of school work which relates to the values of subjects of instruction, and the modes of presenting them. But this, after all, is the least important aspect of the teacher's work. The ethical phase is of greater importance. And then, in order to make any headway in his business, the teacher must get his pupil into a positive attitude toward the situations he presents. It is not as though the pupil were unmotivated, waiting for the teacher to apply his stimulus. He may not respond at all when the teacher brings him into an arithmetical situation, for example; and so he gains no ground as a result of his experience, and he may even lose ground. Pupils often have a more or less permanently antagonistic attitude toward the reactions which the teacher desires

them to make, and, of course, this defeats the end of teaching. If the teacher cannot appeal to the spontaneous impulses of the pupil, he surely cannot teach him except at tremendous waste. Then the teacher's own personal expressions have much to do with the pupil's attitude toward the thing he teaches. If they arouse antipathy in the pupil, the battle is lost; whereas if they attract him, he will be likely to yield himself to the thing which the teacher presents, even though he is not natively inclined toward it. So it becomes of supreme consequence for the teacher to find out all that is known regarding the experiences which attract, and those which repel, children at different stages in their development. Something of this he will have without any study of the subject; but those who have added to what they have gained incidentally through some study in the spirit of modern evolutionary thought have testified that their study has proved of genuine service. And then consider what is required for the efficient government of the school. What tendencies do pupils of different ages possess which can be utilized in establishing and preserving the school as a social unit? What tendencies do they possess which militate against such organization, and how may these tendencies be transformed or combated? It will be granted that no teacher can achieve success who cannot give a more or less satisfactory answer to these questions, if not in formal statement, then at least in instinctive action.

Without doubt some teachers have been reared under such happy circumstances that they have unconsciously acquired an understanding of the way in which a child will acquire a knowledge of his fellows and a disposition to live in peace with them. One sometimes sees mothers who appear to have instinctive knowledge of these matters, and who are most efficient in their instruction. But, on the other hand, the majority of mothers, as of teachers, are greatly lacking in this respect. Spencer has in an effective way called attention to the shortcomings of the average mother and teacher when it comes to the moral training of the young. And he argues that some study of the natural tendencies of children would be of supreme value to all who had them in charge. If the teacher were familiar with the evo-

lution of social and ethical sentiment in the race, he would perhaps understand in a way the method of social and moral development in the child. He would know how to interpret actions of the individual that had a social or ethical bearing, and he would be capable of aiding him in choosing the straight and narrow path. But the detailed history of social and ethical evolution in the race is not at hand; and what the teacher needs then is to study ethical and social development in the individual so far as it is now known.

Here, perhaps, more than anywhere else there is a demand for a study of the natural tendencies of the individual, and the effect of varied educational forces upon these tendencies.